

Present Claim 2 relates to processes for producing such crystals. Present Claims 3, 4, and 15 relate to granules which contain C-type crystals of Neotame, and present Claims 5-13 relate to compositions which contain C-type crystals of Neotame.

The C-type crystals of the present claims are distinct from the A-type crystals afforded by one of the cited references. Moreover, the inventors have surprisingly found that the presently claimed crystals exhibit an increased rate of dissolution in water, as compared to A-type crystals, even though the C-type crystals contain less water than the A-type crystals. Accordingly, this reference cannot affect the patentability of the present claims.

The rejection of Claims 1-15 under 35 U.S.C. § 103 (a) in view of U.S. patent No. 4,810,818 (Wakamatsu et al) in further view of U.S. Patent No. 5,480,668 (Nofre et al) is respectfully traversed.

As conceded on page 3 of the Official Action, Wakamatsu et al is concerned only with Aspartame and is completely silent in regard to Neotame. Nofre et al discloses certain derivatives of Aspartame, including Neotame. However, there is no teaching in Nofre et al of the presently claimed C-type crystals. In fact, as shown in the Declaration of Nagashima filed on September 21, 2001, the Neotame produced according to Nofre et al exists in either an amorphous state or as A-type crystals.

Apparently, the position in the Official Action is that it would have been obvious to apply certain techniques from Wakamatsu et al to the crystallization of the Neotame prepared in Nofre et al and that one of skill in the art would have had an expectation of success for obtaining the presently claimed C-type crystals. However, Applicants submit that the C-type crystal form of the present claims are a new type or form of crystal which is related to the A-type crystal form as a polymorph or pseudo-polymorph. Moreover, Applicants further submit

that one of skill in the art would not have had a reasonable expectation of success for obtaining the presently claimed C-type crystals of Neotame.

In support of these assertions, Applicants cite the duly executed Declaration under 37 C.F.R. § 1.132 of Kashiwagi being filed herewith ("Declaration of Kashiwagi"). As explained in paragraph no. 5 of the Declaration of Kashiwagi, polymorph or pseudo-polymorph related crystal forms exhibit different physical properties which can have a large influence on the industrial processing of the compound. Moreover, the discovery of a new crystal form of a known compound not only is unexpected but also can be commercially important. In fact, no prior art reference has been cited which stands for the proposition that the mere existence of one crystal form for a given compound would suggest the existence of another, different crystal form for that compound.

In any event, the C-type crystals of the present claims exhibit a surprisingly high rate of dissolution in water as compared to A-type crystals of Neotame. As explained in paragraph no. 12 of the Declaration of Kashiwagi, the A-type crystals of Neotame contain 3 to 6 wt.% of water, while the C-type crystals of the present claims contain less than 3 wt.% of water. However, the C-type crystals exhibit a higher rate of dissolution in water as compared to A-type crystals, despite the fact that the C-type crystals contain less water.

In further support of this assertion, the Examiner's attention is directed to the results presented in Test Example 1 on pages 9-10, of the present specification. For the Examiner's convenience, the results from Test Example 1 are presented below in tabular form.



Table

Time	Amount of Crystal Dissolved	
	A-Type Crystals	C-Type Crystals
30 minutes	17 mg	25 mg
60 minutes	34 mg	42 mg
120 minutes	69 mg	86 mg

As concluded on page 10, of the specification, it is evident from these results that the C-type crystals have been found to be useful and exhibit a significantly improved dissolution rate as compared to A-type crystals.

For all of these reasons, the rejection should be withdrawn.

The rejection of Claim 1 under 35 U.S.C. §102(b) in view of Nofre et al is respectfully traversed. In the Official Action, the position is taken that the recitation of a single diffraction peak is insufficient to distinguish the presently claimed C-type crystals from A-type crystals. However, at least in the case of Neotame, this assertion is incorrect.

In this regard, the Examiner's attention is directed toward paragraph nos. 10 and 11 of the Declaration of Kashiwagi. As clearly stated in paragraph no. 10:

In the case of the specific crystals of a particular compound, for instance, A-type crystals, C-type crystals, or other types of crystals of neotame, it is possible to identify one of them using one strong and characteristic peak.

As concluded in paragraph no. 11:

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Crystal of Neotame can be identified as C-type crystals of neotame when a diffraction peak at 7.1° is observed, because this peak is characteristic of the C-type crystal form.

Thus, contrary to the position taken in the Official Action, the recitation of the presence of a diffraction peak at 7.1° is sufficient to clearly distinguish the claimed C-type crystals from other crystal forms of Neotame.

Accordingly, the rejection should be withdrawn.

Applicants submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Norman F. Oblon', written over the typed name.

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